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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,724	11/19/2003	Richard N. Codos	LPPT-13E	6316

7590 12/14/2005
WOOD, HERRON & EVANS, L.L.P.
2700 Carew Tower
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Cincinnati, OH 45202

EXAMINER

TRAN, LY T

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,724

Applicant(s)

CODOS, RICHARD N.

Examiner

Ly T. TRAN

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,6-8,15,17-20,24,26-28,31-34,36,38,41,42 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,4,6-8,15,17-20,24,26-28,31-34,36,38,41,42 and 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 3, 4, 6-8, 15-19, 28, 34-36, 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389).

With respect to claims 3, 4, 6-8, 15-19, 28, 34-36, 50-53, Schwede discloses a method for printing on a substrate comprising moving multiple head mounted on the carriage, having at least one ink jet nozzle thereon, parallel to a plane in which is support a substrate having a surface that is at a non-uniform location, adjust the distance and jetting ink on the surface of the substrate (Fig.1, Column 2: line 45-67, Column 8: line 52-54), sensor to determined the distance (Column 2; line 62-63), automatically adjusts the distance from the nozzle to the surface being printed (Column 6: line 43-45 and Column 1: line 41-63) by measuring the distance from the surface being printed to the print head with a distance sensor (Column 2: line 64). The distance sensor senses the contours of the surface being printed (Column 6: line 54-63) and adjusts the distance between the print head and the surface being printed, control unit (Column 3: line 40-42), signal instruct the motor to adjust the position of the heads (Column 3: line 38-67, Column 4: line 5-37).

2. Claims 24, 31-33, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede et al. (USPN 5,757,389) in view of Stellmach et al. (USPN 5,172,987).

Schwede teach the transmitting of the thickness information (Column 3: line 40-60).

However, Schwede fails to teach two sensors are mounted on the carriage and the sensor includes an indicator roller and the heads transversely on the carriage relative to the substrate.

Stellmach teaches two sensors are mounted on the carriage and the sensor includes an indicator roller (Column 6: line 59-62, Column 6: line 3-9) roller and the heads transversely on the carriage relative to the substrate Column 9: line 60-65).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a roller sensor as taught by Stellmach. The motivation of doing so is to jolting the print head.

3. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede et al. (USPN 5,757,389) in view of Fassler et al. (USPN 5,910,813).

Schwede discloses a sensor to detect the position of the surface of the substrate (Fig.1: element 14) and a table to support the substrate (Fig.1).

However, Schwede fails to teach non-flexible substrate.

Fassler shows that flexible and rigid substrate is an equivalent structure known in the art. Therefore, because flexible and rigid were art recognized equivalents at the

time the invention was made, one of ordinary skill in the art would have found it obvious to substitute rigid substrate for flexible substrate.

4. Claims 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389) in view of Stellmach et al. (USPN 5,172,987) as applied to claim 34 above, further in view of Fassler et al. (USPN 5,910,813).

The combination fo Schwede and Stellmach discloses a table to support the substrate (Fig.1).

However, Schwede and Stellmach fails to teach non-flexible substrate.

Fassler shows that flexible and rigid substrate is an equivalent structure known in the art. Therefore, because flexible and rigid were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute rigid substrate for flexible substrate.

5. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schwede (USPN 5,757,389) in view of Smith (6,637,958).

Schwede discloses the claimed invention except for using a servo- motor instead of a motor. Smith shows that a motor and a servo-motor is an equivalent structure known in the art. Therefore, because the motor and the servo motor were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a servo motor for a motor for the same purpose such as to activating the machine.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ly T. TRAN whose telephone number is 571-272-2155. The examiner can normally be reached on M-F (7:30am-5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571-272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT

December 9, 2005



Stephen D. Meier
Primary Examiner